AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently amended) An input/output management system for managing input or output from or to a disk device connected to <u>an operating</u> ~~a~~ computer, comprising:

a connection information definition block in which the relationship of logical connection between said <u>operating</u> computer and a logical volume included in said disk device or a logical area in a logical volume is defined <u>using computer identification information included in a computer identification information definition division, wherein said connection information definition block includes computer succession information for associating said operating computer with a successor computer that is connected to said disk device</u>; and

an input/output execution control block that controls, based on the <u>computer identification information</u> ~~definition~~, whether said <u>operating</u> computer <u>is enabled to</u> ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume,

<u>wherein in the event that said operating computer is enabled by the computer identification information and a failure of said operating computer is identified, the computer identification information is rewritten according to the computer succession information such that said successor computer is enabled to access a logical volume included in said disk device or a logical area in a logical volume</u> ~~wherein said connection information definition block includes a logical volume connection information specification division in which a connected state value concerning the connection of said computer is specified in relation to each logical volume included in said disk device or each logical area in each logical volume included in said disk device, said connected state value being a numerical value ranging between a minimum value and a maximum value, said maximum value signifying that said computer is fully connected, said minimum value signifying that said computer is fully disconnected, an intermediate value~~

~~between said maximum value and said minimum value signifying a conditionally connected state for said computer.~~

2.   (Currently amended) An input/output management system for managing input or output from or to a disk device connected to a plurality of computers, comprising:

a connection information definition block in which the relationship of logical connection between each of said computers and a logical volume included in said disk device or a logical area in a logical volume is defined using computer identification information, wherein said connection information definition block includes computer succession information for associating an operating computer connected to said disk device with a successor computer connected to said disk device; and

an input/output execution control block that controls, based on the computer identification information ~~definition~~, whether each of said computers is enabled to ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume,

wherein in the event that said operating computer is enabled by the computer identification information and a failure of said operating computer is identified, the computer identification information is rewritten according to the computer succession information such that said successor computer is enabled to access a logical volume included in said disk device or a logical area in a logical volume ~~wherein said connection information definition block includes a logical volume connection information specification division in which a connected state value concerning the connection of said computer is specified in relation to each logical volume included in said disk device or each logical area in each logical volume included in said disk device, said connected state value being a numerical value ranging between a minimum value and a maximum value, said maximum value signifying that said computer is fully connected, said minimum value signifying that said computer is fully disconnected, an intermediate value between said maximum value and said minimum value signifying a conditionally connected state for said computer.~~

3.   (Currently amended) An input/output management system according to Claim 1, wherein said ~~connection information definition block comprises:~~

a computer identification information definition division <u>defines</u> ~~in which~~ physical identification information that uniquely indicates said <u>operating</u> computer connected to said disk device ~~is defined~~.

4.   (Canceled)

5.   (Currently amended) An input/output management system according to Claim <u>2</u> [[4]], wherein

~~said computer includes a plurality of logical computers,~~

~~computer identification information concerning each of said logical computers is specified in said computer identification information definition division, and~~

said input/output execution control block controls whether each of said ~~logical~~ computers that share the same physical input/output path can access a logical area in a logical volume included in said disk device.

6.   (Currently amended) An input/output management system according to Claim 1, wherein said ~~connection information definition block comprises:~~

a computer identification information <u>defines</u> ~~definition division in which~~ the relationship of logical connection between said <u>operating</u> computer and a logical volume included in said disk device ~~is defined~~ using port numbers assigned to the ports of said disk device connected to said <u>operating</u> computer.

7.   (Currently amended) An input/output management system ~~for managing input or output from or to a disk device connected to a computer~~ according to Claim 1,

wherein the <u>computer identification information</u> ~~definition~~ is used to control whether each of a plurality of application programs running in said <u>operating</u> computer <u>is</u>

enabled to ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume.

8.   (Currently amended) An input/output management system according to Claim 7, further comprising a schedule definition division in which a plurality of pieces of computer identification information that defines whether said operating computer or each of said application programs is enabled to ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume is specified in relation to respective time zones, and in which a schedule for automatically changing the plurality of pieces of computer identification information is predefined.

9.   (Currently amended) An input/output management method for managing input or output from or to a disk device connected to an operating [[a]] computer, the method comprising ~~the steps of~~:

defining the relationship of logical connection between said operating computer and a logical volume included in said disk device or a logical area in a logical volume, wherein the relationship is defined using computer identification information;

associating said operating computer with a successor computer using computer succession information, wherein the successor computer is connected to said disk device; ~~and~~

controlling, based on the computer identification information ~~definition~~, whether said operating computer is enabled to ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume; and [[,]]

wherein in the event that said operating computer is enabled by the computer identification information and a failure of said operating computer is identified, rewriting the computer identification information according to the computer succession information such that said successor computer is enabled to access a logical volume included in said disk device or a logical area in a logical volume ~~wherein said connection information definition block includes a logical volume connection information specification division in which a connected state value~~

~~concerning the connection of said computer is specified in relation to each logical volume~~
~~included in said disk device or each logical area in each logical volume included in said disk~~
~~device, said connected state value being a numerical value ranging between a minimum value~~
~~and a maximum value, said maximum value signifying that said computer is fully connected,~~
~~said minimum value signifying that said computer is fully disconnected, an intermediate value~~
~~between said maximum value and said minimum value signifying a conditionally connected state~~
~~for said computer.~~

10.   (Currently amended) An input/output management method according to
Claim 9,

wherein the <u>computer identification information</u> ~~definition of the relationship of~~
~~connection~~ contains physical identification information that uniquely indicates said <u>operating</u>
computer connected to said disk device.

11.   (Currently amended) An input/output management method for managing
input or output from or to a disk device connected to <u>an operating</u> [[a]] computer, <u>the method</u>
comprising ~~the steps of~~:

defining, based on computer identification information and logical volume
connection information, the relationship of logical connection between said <u>operating</u> computer
and a logical volume included in said disk device or a logical area in a logical volume; ~~and~~

<u>associating said operating computer with a successor computer using computer</u>
<u>succession information, wherein the successor computer is connected to said disk device;</u>

controlling, based on the <u>computer identification information and the logical</u>
<u>volume connection information</u> ~~definition~~, whether said <u>operating</u> computer <u>is enabled to</u> ~~can~~
access a logical area in a logical volume included in said disk device<u>;</u> and [[,]]

<u>wherein in the event that said operating computer is enabled by the computer</u>
<u>identification information and a failure of said operating computer is identified, rewriting the</u>
<u>computer identification information according to the computer succession information such that</u>

said successor computer is enabled to access a logical volume included in said disk device or a logical area in a logical volume ~~wherein said connection information definition block includes a logical volume connection information specification division in which a connected state value concerning the connection of said computer is specified in relation to each logical volume included in said disk device or each logical area in each logical volume included in said disk device, said connected state value being a numerical value ranging between a minimum value and a maximum value, said maximum value signifying that said computer is fully connected, said minimum value signifying that said computer is fully disconnected, an intermediate value between said maximum value and said minimum value signifying a conditionally connected state for said computer.~~

12.   (Currently amended) An input/output management method according to Claim 9, <u>further comprising controlling</u> ~~wherein~~ whether each of a plurality of application programs running in said <u>operating</u> computer <u>is enabled to</u> ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume ~~is controlled.~~

13.   (Currently amended) An input/output management method according to Claim 11, wherein a plurality of pieces of definition information that defines whether said <u>operating</u> computer or each of a plurality of application programs running in said <u>operating</u> computer <u>is enabled to</u> ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume is automatically switched with the start of each of <u>a</u> time <u>zone</u> ~~zones~~ according to a predefined schedule.

14.   (Canceled)

15.   (Currently amended) A computer-readable storage medium including a disk control program for executing a method of processing information based on which input or output from or to a disk device connected to <u>an operating</u> [[a]] computer is managed, wherein said disk control program comprises:

code for defining the relationship of logical connection between said <u>operating</u> computer and a logical volume included in said disk device or a logical area in a logical volume on the basis of both physical identification information that uniquely indicates said <u>operating</u> computer connected to said disk device, and logical volume connection information that contains a connected state value concerning the connection of said <u>operating</u> computer to each logical volume included in said disk device or each logical area in each logical volume;

<u>code for associating said operating computer with a successor computer using computer succession information, wherein the successor computer is connected to said disk device;</u> and

code for controlling, based on the <u>physical identification information and the logical volume connection information</u> ~~definition~~, whether said <u>operating</u> computer <u>is enabled to</u> ~~can~~ access a logical volume included in said disk device or a logical area in a logical volume,

<u>wherein in the event that said operating computer is enabled by the physical identification information and the logical volume connection information and in the event that a failure of said operating computer is identified, rewriting the physical identification information according to the computer succession information such that said successor computer is enabled to access a logical volume included in said disk device or a logical area in a logical volume</u> ~~wherein said connected state value is a numerical value that ranges between a minimum value and a maximum value, said maximum value signifying that said computer is fully connected, said minimum value signifying that said computer is fully disconnected, an intermediate value between said maximum value and said minimum value signifying a conditionally connected state for said computer.~~

16-20 (Canceled)